

WHAT IS CLAIMED IS:

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1. A method of facilitating redirection of traffic between a server and a client to between the client and a nearest replica selected from a plurality of replicas, the method comprising:
 - 5 receiving a packet that is travelling between a client and a server or between the client and a replica;
 - when the received packet is a start packet that is travelling from the client to the server, altering the start packet to indicate that the start packet should be forwarded to any replica that duplicates the data content of the server;
 - 10 when the received packet is an acknowledgement packet that is received first, altering the acknowledgement so that it spoofs the server when the acknowledgement originates from the replica; and
 - 15 when the received packet is a subsequent packet received after the start packet and the acknowledgement packet, altering the subsequent packet so that it spoofs the server when the subsequent packet originates from the replica or altering the subsequent packet so that it goes to the replica when the subsequent packet originates from the client.
2. A method as recited in claim 1, wherein the server is spoofed by replacing a source identifier of the received packet with a destination identifier of the start packet.
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3. A method as recited in claim 1, wherein the server is spoofed by encapsulating the received packet with a source identifier that equals a destination identifier of the start packet.

4. A method as recited in claim 1, wherein the received packet is encapsulated and the server is spoofed by cracking the received packet.

5. A method as recited in claim 1, further comprising:

determining that the acknowledgement packet originates from the replica when a source identifier of the acknowledgement packet does not equal a destination identifier of the start packet;

determining that the subsequent packet originates from the replica when the source identifier of the subsequent packet does not equal the destination identifier of the start packet; and

determining that the subsequent packet is going to the server when the destination identifier of the subsequent packet equals the destination identifier of the start packet.

6. A method as recited in claim 1, wherein the start packet is altered by adding a tag to or modifying the tag of the start packet to indicate that the start packet should be forwarded to any replica that duplicates data content of the server.

7. A method as recited in claim 1, wherein the start packet is only altered when the start packet is associated with web data.

8. A method as recited in claim 7, wherein the start packet is associated with web data when the start packet has a destination port utilized for accessing web data.

9. A method as recited in claim 1, further comprising:

storing a destination identifier of the start packet; and

storing and associating a source identifier of the acknowledgement packet with the stored destination identifier of the start packet.

10. A method as recited in claim 9, wherein the destination identifier of the start packet and source identifier of the acknowledgement packet are stored and associated as an 5 entry within a table.

11. A method as recited in claim 9, wherein the source identifier of the acknowledgement packet is only stored and associated with the destination identifier of the start packet when the source identifier of the acknowledgement packet does not indicate the server.

10 12. A method as recited in claim 11, further comprising deleting the destination identifier of the start packet when the source identifier of the first acknowledgement packet does not indicate the server.

13. A method as recited in claim 9, further comprising:

prior to storing and associating the source identifier of the acknowledgement packet, cracking the acknowledgement packet to obtain the source identifier when the acknowledgement packet has been encapsulated, 15 and

wherein the server is spoofed for the acknowledgement by cracking the acknowledgement packet.

20 14. A method as recited in claim 1, further comprising sending a reset to the replica or the server identified as a source of the received packet when the received packet is received subsequently to the acknowledgement packet received first.

15. A method of facilitating redirection of traffic between a server and a client to
between the client and a selected one from a plurality of replicas, the method comprising:

receiving a start packet sent from a client to a server; and

when the start packet has a tag indicating that the start packet should

5 be forwarded to any replica that duplicates the data content of the server,
encapsulating and sending the start packet to each replica associated with the
server.

16. A method of facilitating redirection of traffic between a server and a client to
between the client and a selected one from a plurality of replicas, the method comprising:

10 in a replica device, receiving a start packet sent from a client to a
server, the start packet being encapsulated;

cracking the encapsulated start packet to determine the client's address;

and

15 when the replica device is active and not busy, sending an immediate
acknowledgement packet to the client in response to the received start packet.

17. A method as recited in claim 16, wherein the acknowledgement packet has a
source identifier that indicates the replica device

18. A method as recited in claim 16, wherein the acknowledgement packet has a
source identifier that indicates the server.

20 19. A method as recited in claim 18, wherein the acknowledgement packet is
comprised of a source identifier that indicates the server that is encapsulated with a source
identifier that indicates the replica device.

20. A computer system operable to facilitate redirection of traffic between a server and a client to between the client and a nearest replica selected from a plurality of replicas, the computer system comprising:

a memory; and

5 a processor coupled to the memory,

wherein at least one of the memory and the processor are adapted to provide:

receiving a packet that is travelling between a client and a server or between the client and a replica;

when the received packet is a start packet that is travelling from the client to the server, altering the start packet to indicate that the start packet should be forwarded to any replica that duplicates the data content of the server;

when the received packet is an acknowledgement packet that is received first, altering the acknowledgement so that it spoofs the server when the acknowledgement originates from the replica; and

when the received packet is a subsequent packet received after the start packet and the acknowledgement packet, altering the subsequent packet so that it spoofs the server when the subsequent packet originates from the replica or altering the subsequent packet so that it goes to the replica when the subsequent packet originates from the client.

21. A computer system as recited in claim 20 wherein the server is spoofed by replacing a source identifier of the received packet with a destination identifier of the start packet.

22. A computer system as recited in claim 20, wherein the server is spoofed by encapsulating the received packet with a source identifier that equals a destination identifier of the start packet.

5 23. A computer system as recited in claim 20, wherein the received packet is encapsulated and the server is spoofed by cracking the received packet.

24. A computer system as recited in claim 20, the at least one of the memory and the processor are further adapted to provide:

10 determining that the acknowledgement packet originates from the replica when a source identifier of the acknowledgement packet does not equal a destination identifier of the start packet;

15 determining that the subsequent packet originates from the replica when the source identifier of the subsequent packet does not equal the destination identifier of the start packet; and

15 determining that the subsequent packet is going to the server when the destination identifier of the subsequent packet equals the destination identifier of the start packet.

25. A computer system as recited in claim 20, wherein the start packet is altered by adding a tag to or modifying the tag of the start packet to indicate that the start packet should be forwarded to any replica that duplicates data content of the server.

20 26. A computer system as recited in claim 20, wherein the start packet is only altered when the start packet is associated with web data.

27. A computer system as recited in claim 26, wherein the start packet is associated with web data when the start packet has a destination port utilized for accessing web data.

28. A computer system as recited in claim 20, the at least one of the memory and
5 the processor are further adapted to provide:

storing a destination identifier of the start packet; and

storing and associating a source identifier of the acknowledgement
packet with the stored destination identifier of the start packet.

29. A computer system as recited in claim 28, wherein the destination identifier
10 of the start packet and source identifier of the acknowledgement packet are stored and
associated as an entry within a table.

30. A computer system as recited in claim 28, wherein the source identifier of the
acknowledgement packet is only stored and associated with the destination identifier of the
start packet when the source identifier of the acknowledgement packet does not indicate the
15 server.

31. A computer system as recited in claim 30, the at least one of the memory and
the processor are further adapted to provide deleting the destination identifier of the start
packet when the source identifier of the first acknowledgement packet does not indicate the
server.

20 32. A computer system as recited in claim 28, the at least one of the memory and
the processor are further adapted to provide:

prior to storing and associating the source identifier of the
acknowledgement packet, cracking the acknowledgement packet to obtain the

source identifier when the acknowledgement packet has been encapsulated,
and

wherein the server is spoofed for the acknowledgement by cracking
the acknowledgement packet.

5 33. A method as recited in claim 20, the at least one of the memory and the
processor are further adapted to provide sending a reset to the replica or the server identified
as a source of the received packet when the received packet is received subsequently to the
acknowledgement packet received first.

10 34. A computer system operable to facilitate redirection of traffic between a
server and a client to between the client and a selected one from a plurality of replicas, the
computer system comprising:

a memory; and

a processor coupled to the memory,

wherein at least one of the memory and the processor are adapted to

15 provide:

receiving a start packet sent from a client to a server; and

when the start packet has a tag indicating that the start packet
should be forwarded to any replica that duplicates the data content of
the server, encapsulating and sending the start packet to each replica
associated with the server.

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35. A computer system operable to facilitate redirection of traffic between a
server and a client to between the client and a selected one from a plurality of replicas, the
computer system comprising:

a memory; and
a processor coupled to the memory,
wherein at least one of the memory and the processor are adapted to provide:

5 receiving a start packet sent from a client to a server, the start packet being encapsulated;

cracking the encapsulated start packet to determine the client's address; and

10 when the replica device is active and not busy, sending an immediate acknowledgement packet to the client in response to the received start packet.

36. A computer system as recited in claim 35, wherein the acknowledgement packet has a source identifier that indicates the replica device

15 37. A computer system as recited in claim 35, wherein the acknowledgement packet has a source identifier that indicates the server.

38. A computer system as recited in claim 35, wherein the acknowledgement packet is comprised of a source identifier that indicates the server that is encapsulated with a source identifier that indicates the replica device.

20 39. A computer program product for facilitating redirection of traffic between a server and a client to between the client and a selected one from a plurality of replicas, the computer program product comprising:

at least one computer readable medium;

computer program instructions stored within the at least one computer readable product configured to cause a processing device to:

receive a packet that is travelling between a client and a server or between the client and a replica;

5 when the received packet is a start packet that is travelling from the client to the server, alter the start packet to indicate that the start packet should be forwarded to any replica that duplicates the data content of the server;

10 when the received packet is an acknowledgement packet that is received first, alter the acknowledgement so that it spoofs the server when the acknowledgement originates from the replica; and

15 when the received packet is a subsequent packet received after the start packet and the acknowledgement packet, alter the subsequent packet so that it spoofs the server when the subsequent packet originates from the replica, or alter the subsequent packet so that it goes to the replica when the subsequent packet originates from the client.

40. A computer program product for facilitating redirection of traffic between a server and a client to between the client and a selected one from a plurality of replicas, the computer program product comprising:

at least one computer readable medium;

20 computer program instructions stored within the at least one computer readable product configured to cause a processing device to:

receive a start packet sent from a client to a server; and

when the start packet has a tag indicating that the start packet should be forwarded to any replica that duplicates the data content of

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the server, encapsulate and send the start packet to each replica associated with the server.

41. A computer program product for facilitating redirection of traffic between a server and a client to between the client and a selected one from a plurality of replicas, the computer program product comprising:

at least one computer readable medium;

computer program instructions stored within the at least one computer readable product configured to cause a processing device to:

receive a start packet sent from a client to a server, the start packet being encapsulated;

decode the encapsulated start packet to determine the client's address; and

when the replica device is active and not busy, send an immediate acknowledgement packet to the client in response to the received start packet.

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42. A computer program product as recited in claim 41, wherein the acknowledgement packet has a source identifier that indicates the replica device

43. A computer program product as recited in claim 41, wherein the acknowledgement packet has a source identifier that indicates the server.

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44. A computer program product as recited in claim 41, wherein the acknowledgement packet is comprised of a source identifier that indicates the server that is encapsulated with a source identifier that indicates the replica device.

45. An apparatus for facilitating redirection of traffic between a server and a client to between the client and a nearest replica selected from a plurality of replicas, the apparatus comprising:

means for receiving a packet that is travelling between a client and a server or between the client and a replica;

means for altering the start packet to indicate that the start packet should be forwarded to any replica that duplicates the data content of the server when the received packet is a start packet that is travelling from the client to the server;

means for altering the acknowledgement so that it spoofs the server when the acknowledgement originates from the replica when the received packet is an acknowledgement packet that is received first; and

means for altering the subsequent packet so that it spoofs the server when the received packet is a subsequent packet received after the start packet and the acknowledgement packet and when the subsequent packet originates from the replica or altering the subsequent packet so that it goes to the replica when the subsequent packet originates from the client.

46. An apparatus for facilitating redirection of traffic between a server and a client to between the client and a selected one from a plurality of replicas, the apparatus comprising:

means for receiving a start packet sent from a client to a server; and

means for encapsulating and sending the start packet to each replica associated with the server when the start packet has a tag indicating that the

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start packet should be forwarded to any replica that duplicates the data content
of the server.

41. An apparatus for facilitating redirection of traffic between a server and a
client to between the client and a selected one from a plurality of replicas, the apparatus
comprising:

means for receiving a start packet sent from a client to a server, the
start packet being encapsulated;

means for cracking the encapsulated start packet to determine the
client's address; and

means for sending an immediate acknowledgement packet to the client
in response to the received start packet when the replica device is active and
not busy.

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